

**ABSTRACT**

A method for fabricating multi layer microelectromechanical and microfluidic devices is disclosed. Multi layer microelectromechanical and microfluidic devices are fabricated on a substrate with layers of predetermined weak and strong bond regions where deconstructed  
5 layers of devices at or on the weak bond regions. The layers are then peeled and subsequently bonded to produce a multi layer microelectromechanical and microfluidic devices. An arbitrary number of layers can be bonded and stacked to create either microelectromechanical or microfluidic device or a hybrid type of device.. Also disclosed are methods of creating edge interconnects and vias through the substrate to form interconnections between layers and  
10 devices thereon.